

Applicant: Pekka Linnonmaa et al.  
Application No.: 10/598,664  
Response to Office action mailed Sep. 20, 2007  
Response filed December 18, 2007

### **Remarks**

Claims 59–70 remain pending in the application. In the Office action dated Sep. 20, 2007, claims 31–58 were rejected under 35 U.S.C. 103(a) as being unpatentable over Mauer D1 (EP 1335066A1;US 6,758,135) in view of Linnonmaa D4 (WO 01/55504;US 7,059,066).

The claims have been rewritten as new method claims 59–64 which more clearly set forth the invention, requiring three separate moisture levels, 4–7% before reeling the paper web into a machine reel, 8–12% in the pre-moisturizer, and 6–10 % in the intermediate moisturizer. The claims require the pre-moisturizer and the intermediate moisturizer being substantially equally spaced from respective nips. Further calendering to a specific roughness of 1.0 –1.1 $\mu$ m and a gloss of 54–60 % is claimed. The new apparatus claims likewise claim the apparatus and a web with specific web properties of moisture content or gloss and roughness positioned in the apparatus.

These specific limitations are not taught by the combination of references, specifically forming a paper of the claimed roughness and gloss, according to the claimed steps.

Mauer teaches drying a paper web and re-moisturizing the paper web to less than 10% moisture content prior to winding it into a reel to reduce winding defects, followed by unwinding the paper and increasing its moisture content greater than 10% and calendering the web in a multi-nip calender.

Linnonmaa teaches on-line calendering (p. 1, line 12) using a moisture gradient multi-nip calender.

Calendering paper is an industrial process which, without adding any substantial material content to the web, increases the value of a paper web. Given the commodity nature of paper it can readily be observed that a small increase in the value effected by calendering can be disproportionately valuable. Thus there is inherently a strong motive for improving calendering, and that a particular beneficial arrangement is not shown in the prior art argues that it is not obvious.

Applicant has set forth a method and apparatus for off-line calendering which the application discloses as producing higher-quality paper than an online calender, at a higher

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speed than an off-line calender. See paragraphs [0005] and [0020]

“[R]ejection on obviousness cannot be sustained by merely conclusory statements; instead, there must be some articulated reasoning and with some rational underpinnings to support the legal conclusion of obviousness.” (MPEP 2143.01 IV 8<sup>th</sup> ed, Rev. 6, quoting KSR.)

The Examiner concludes it would be obvious to combine the references modifying “the multinip calender of Mauer to be in the type of multinip calender... as taught by Linnonmaa, in *order to improve a quality values of paper*... [emphasis added].” This is insufficient, relating only generally to why calendering is performed, not to why an online calender solution (Linnonmaa) should be combined with a known off-line calendering arrangement (Mauer). Further, the references in combination do not show calendering to a specific roughness of 1.0 –1.1 $\mu$ m and a gloss of 54–60 %.

Claim 60 claims a second pre-moisturizer and a yet narrower range of the gloss, which further distinguishes over the art of record.

Claim 61 further distinguishes over the art of record by claiming the measuring and controlling steps. Mauer teaches only measuring moisture content and controlling moisture content. Mauer, col. 5, lines 35–37 states: “The incorporation of at least one control circuit in device 10 includes the control of all relevant *paper* quality parameters.”(emphases supplied) But does not suggest controlling nip pressure and roll temperature.

Claim 62 claims a calender arrangement not shown in Mauer or Linnonmaa.

Claims 63 and 64 claim the moisturizing of the pre-moisturizer, or the moisturizing of the intermediate moisturizer as being performed against a roll, further distinguishing over Linnonmaa.

Claim 66 claims a second pre-moisturizer and a web having roughness of 1.0 –1.1 $\mu$ m and a gloss of 56–60 %

Claim 67 claims measuring devices and a control unit not shown in the art of record.

Claim 68 claims a calender arrangement not shown in Mauer or Linnonmaa.

Claims 69 and 70 claim the location of the pre-moisturizer, or intermediate

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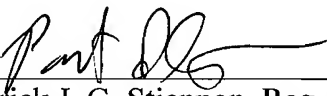
moisturizer as being opposite a roll, further distinguishing over Linnonmaa.

It is to be noted that co-owned application serial number 10/598,664 has been provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 31–44 (now canceled) of the present application. An IDS directed to the references cited in that application, but not previously cited in this application, accompanies this response.

Applicant believes that no new matter has been added by this amendment.

Applicant submits that the claims, as amended, are in condition for allowance. Favorable action thereon is respectfully solicited.

Respectfully submitted,

  
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